

CLAIMS

I claim:

1. A carpet cleaning system for use over long runs
comprising:

a central tank and vacuum assembly facilitating the routing of clean and waste water, said central tank and vacuum assembly being for creation of vacuum pressure for recapturing water applied to a carpet being cleaned;

a wand assembly adapted for applying clean water to a carpet to be cleaned, said wand assembly being adapted for recapturing said water in the form of waste water from the carpet;

a hose assembly having a first end and a second end, said first end being operationally coupled to said central tank and vacuum assembly, said second end being operationally coupled to said wand assembly, said hose assembly being for conduction water and waste water between said wand assembly and said central tank and vacuum assembly.

2. The system of claim 1, wherein said central tank and vacuum assembly further comprises:

a chassis assembly having a plurality of wheels operationally coupled to a bottom side of said chassis assembly;

a vacuum assembly positioned within said chassis assembly, said vacuum assembly being for creating vacuum pressure for recapturing waste water;

a waste recovery assembly operationally coupled to said vacuum assembly, said waste recovery assembly providing a collection and separation means such that recovered waste water is

separated from air being routed to said vacuum assembly, said waste recovery assembly resting upon said chassis assembly; and
a water pressure assembly positionable inside said chassis assembly, said water pressure assembly being for pressurizing water being routed to said wand assembly.

3. The system of claim 2, wherein said vacuum assembly further comprises:

a first blower member having an first inlet and a first outlet, said first blower assembly being configured to create a vacuum at said first inlet and exhaust air from said first outlet;

a second blower member having an second inlet and a second outlet, said second blower assembly being configured to create a vacuum at said second inlet and exhaust air from said second outlet;

said first and second inlets being coupled in parallel to increase airflow through said vacuum assembly.

4. The system of claim 3, wherein said vacuum assembly further comprises:

a third blower member having an third inlet and an third outlet, said third blower assembly being configured to create a vacuum at said third inlet and exhaust air from said third outlet;

said third outlet being operationally coupled to said first and second inlets whereby said third blower member being configured in series with a combination of said first and second blower members, said third blower member being coupled in series to increase vacuum pressure created by said vacuum assembly.

5. The system of claim 2, wherein said waste recovery assembly further comprises:

a lower tank portion coupled to said chassis assembly, said lower tank portion being for collecting waste water;

an upper tank portion removably coupled to said lower tank portion, said upper tank portion having a vacuum inlet operationally coupled to said vacuum assembly, said upper tank portion having a hose connection for operationally coupling to said hose assembly;

said upper tank portion being environmentally coupled to said lower tank portion.

6. The system of claim 5, wherein said lower tank portion further comprises a waste disposal outlet positioned through a wall of said lower tank portion, said waste disposal outlet facilitating flow of recovered waste water from said waste recovery assembly to a waste drain.

7. The system of claim 5, wherein said upper tank portion further comprises a vacuum connection tube extending through said upper tank portion, said vacuum connection tube having a proximal end and a distal end, said distal end being couplable to an inlet of said vacuum assembly, said proximal end extending into said upper tank portion, said proximal end having a vacuum filter attached thereto.

8. The system of claim 5, wherein said waste recovery assembly further comprises a waste filter positioned between said upper tank portion and said lower tank portion whereby waste water being collected in said waste recovery assembly flows into said

upper tank portion, through said waste filter and into said lower tank portion, said waste filter being removable from said waste recovery assembly for cleaning after use.

9. The system of claim 1, further comprising:
wherein said central tank and vacuum assembly further comprises:
- a chassis assembly having a plurality of wheels operationally coupled to a bottom side of said chassis assembly;
 - a vacuum assembly positioned within said chassis assembly, said vacuum assembly being for creating vacuum pressure for recapturing waste water;
 - a waste recovery assembly operationally coupled to said vacuum assembly, said waste recovery assembly providing a collection and separation means such that recovered waste water is separated from air being routed to said vacuum assembly, said waste recovery assembly resting upon said chassis assembly; and
 - a water pressure assembly positionable inside said chassis assembly, said water pressure assembly being for pressurizing water being routed to said wand assembly;
- wherein said vacuum assembly further comprises:
- a first blower member having a first inlet and a first outlet, said first blower assembly being configured to create a vacuum at said first inlet and exhaust air from said first outlet;
 - a second blower member having a second inlet and a second outlet, said second blower assembly being configured to create a vacuum at said second inlet and exhaust air from said second outlet;

said first and second inlets being coupled in parallel to
increase airflow through said vacuum assembly;
a third blower member having an third inlet and an third
outlet, said third blower assembly being configured to
create a vacuum at said third inlet and exhaust air from
said third outlet;
said third outlet being operationally coupled to said first and
second inlets whereby said third blower member being
configured in series with a combination of said first and
second blower members, said third blower member being
coupled in series to increase vacuum pressure created by
said vacuum assembly;
wherein said waste recovery assembly further comprises:
a lower tank portion coupled to said chassis assembly, said
lower tank portion being for collecting waste water;
an upper tank portion removably coupled to said lower tank
portion, said upper tank portion having a vacuum inlet
operationally coupled to said vacuum assembly, said
upper tank portion having a hose connection for
operationally coupling to said hose assembly;
said upper tank portion being environmentally coupled to said
lower tank portion;
said lower tank portion further comprises a waste disposal
outlet positioned through a wall of said lower tank
portion, said waste disposal outlet facilitating flow of
recovered waste water from said waste recovery
assembly to a waste;
said upper tank portion further comprises a vacuum
connection tube extending through said upper tank
portion, said vacuum connection tube having a proximal

end and a distal end, said distal end being couplable to an inlet of said vacuum assembly, said proximal end extending into said upper tank portion, said proximal end having a vacuum filter attached thereto; and a waste filter positioned between said upper tank portion and said lower tank portion whereby waste water being collected in said waste recovery assembly flows into said upper tank portion, through said waste filter and into said lower tank portion, said waste filter being removable from said waste recovery assembly for cleaning after use.

10. The system of claim 2, wherein said water pressure assembly further comprises:

a fresh water inlet extending through a wall of said water pressure assembly, said fresh water inlet being operationally couplable to a water supply;

a water pump positioned within said water pressure assembly and operationally coupled to said fresh water inlet, said water pump being for pressurizing the fresh water; and

a pressurized water outlet extending through said wall of said water pressure assembly, said pressurized water outlet being operationally coupled to said water pump.

11. The system of claim 10, wherein said water pressure assembly further comprising:

an electrical power connection electrically coupled to said water pump, said electrical power connection facilitating powering said water pump;

a power switch electrically connected between said electrical power connection and said water pump, said power switch being for selectively connecting said water pump to said electrical power connection and selectively interrupting said connection whereby said water pump is selectively turned on and off;

a pressure gauge positioned on said wall of said water pressure assembly, said pressure gauge being coupled to said pressurized water outlet, said pressure gauge providing a visual indication of available water pressure.

12. The system of claim 9, further comprising an electrical connection assembly coupled to said chassis assembly, said electrical connection assembly facilitating routing of electrical power to said vacuum assembly.

13. The system of claim 12, wherein said electrical connection assembly further comprises:

a first electrical power connection for facilitating connection of said electrical connection assembly to an electrical power source, said first electrical power connection being positioned on a panel of said electrical connection assembly;

a first electrical switch positioned on said panel of said electrical connection assembly, said first electrical switch being connected between said first electrical power connection and said first blower member such that said first electrical switch controls a flow of electricity from said first electrical power connection to said first blower member;

a second electrical power connection for facilitating connection of said electrical connection assembly to an electrical

power source, said second electrical power connection being positioned on a panel of said electrical connection assembly;

a second electrical switch positioned on said panel of said electrical connection assembly, said second electrical switch being connected between said second electrical power connection and said second blower member such that said second electrical switch controls a flow of electricity from said second electrical power connection to said second blower member;

a third electrical power connection for facilitating connection of said electrical connection assembly to an electrical power source, said third electrical power connection being positioned on a panel of said electrical connection assembly; and

a third electrical switch positioned on said panel of said electrical connection assembly, said third electrical switch being connected between said third electrical power connection and said third blower member such that said third electrical switch controls a flow of electricity from said third electrical power connection to said third blower member.

14. The system of claim 13, further comprising:

a waste disposal pump positioned in said lower tank portion under said waste filter, said waste disposal pump being fluidly coupled to said waste disposal outlet 42 for pumping waste water out of the lower tank portion; and

a waste disposal float operationally coupled to said waste disposal pump, said waste disposal float activating said waste disposal pump when waste water reaches a predetermined level in said lower tank portion.

15. The system of claim 14, further comprising a safety switch assembly positioned in said waste recovery assembly, said safety switch assembly interrupting operation of said vacuum assembly when waste water reaches a second predetermined level in said waste recovery assembly to reduce damage to said vacuum assembly in event of a waste disposal pump failure.

16. The system of claim 9, further comprising:
wherein said water pressure assembly further comprises:
a fresh water inlet extending through a wall of said water pressure assembly, said fresh water inlet being operationally couplable to a water supply;
a water pump positioned within said water pressure assembly and operationally coupled to said fresh water inlet, said water pump being for pressurizing the fresh water;
a pressurized water outlet extending through said wall of said water pressure assembly, said pressurized water outlet being operationally coupled to said water pump;
an electrical power connection electrically coupled to said water pump, said electrical power connection facilitating powering said water pump;
a power switch electrically connected between said electrical power connection and said water pump, said power switch being for selectively connecting said water pump to said electrical power connection and selectively interrupting said connection whereby said water pump is selectively turned on and off;
a pressure gauge positioned on said wall of said water pressure assembly, said pressure gauge being coupled to said pressurized water outlet, said pressure gauge

providing a visual indication of available water pressure;

an electrical connection assembly coupled to said chassis assembly, said electrical connection assembly facilitating routing of electrical power to said vacuum assembly;

wherein said electrical connection assembly further comprises:

- a first electrical power connection for facilitating connection of said electrical connection assembly to an electrical power source, said first electrical power connection being positioned on a panel of said electrical connection assembly;
- a first electrical switch positioned on said panel of said electrical connection assembly, said first electrical switch being connected between said first electrical power connection and said first blower member such that said first electrical switch controls a flow of electricity from said first electrical power connection to said first blower member;
- a second electrical power connection for facilitating connection of said electrical connection assembly to an electrical power source, said second electrical power connection being positioned on a panel of said electrical connection assembly;
- a second electrical switch positioned on said panel of said electrical connection assembly, said second electrical switch being connected between said second electrical power connection and said second blower member such that said second electrical switch controls a flow of

electricity from said second electrical power connection to said second blower member;
a third electrical power connection for facilitating connection of said electrical connection assembly to an electrical power source, said third electrical power connection being positioned on a panel of said electrical connection assembly; and
a third electrical switch positioned on said panel of said electrical connection assembly, said third electrical switch being connected between said third electrical power connection and said third blower member such that said third electrical switch controls a flow of electricity from said third electrical power connection to said third blower member.

17. The system of claim 16, further comprising:
wherein said vacuum assembly develops 230 inches of water lift capability and 200 cfm of vacuum;
wherein said hose assembly having an overall length of 400 feet, said hose assembly having a water supply line for routing water from said water pressure assembly to said wand assembly, said hose assembly having a waste return line coupled to said waste recovery assembly for routing waste water from said wand assembly to said waste recovery assembly, said waste return line having a diameter of 2 inches;
a water supply hose having a first end and a second end, said first end being couplable to said fresh water inlet, said second end being couplable to a water supply;

a waste disposal line having a first and second end, said first end being couplable to said waste disposal outlet, said second end being positionable next to a water disposal drain;

a plurality of power cords, each one of said power cords being associated with one of said electrical power connections, each one of said power cords having a first end couplable with a conventional electrical outlet, each one of said power cords having a second end couplable with an associated one of said electrical power connections;

a handle member coupled to said chassis assembly from facilitating positioning of said system.

18. A method of cleaning carpets comprising:

providing a pre-treat chemical for breaking up stains on a carpet to be cleaned;

applying said pre-treat chemical to the carpet to be cleaned;

providing a carpet cleaning system, said carpet cleaning system comprising:

a central tank and vacuum assembly facilitating the routing of clean and waste water, said central tank and vacuum assembly being for creation of vacuum pressure for recapturing water applied to a carpet being cleaned;

said central tank and vacuum assembly further comprises:

a chassis assembly having a plurality of wheels

operationally coupled to a bottom side of said chassis assembly;

a vacuum assembly positioned within said chassis assembly, said vacuum assembly being for creating vacuum pressure for recapturing waste water;

a waste recovery assembly operationally coupled to said vacuum assembly, said waste recovery assembly providing a collection and separation means such that recovered waste water is separated from air being routed to said vacuum assembly, said waste recovery assembly resting upon said chassis assembly;

a water pressure assembly positionable inside said chassis assembly, said water pressure assembly being for pressurizing water being routed to said wand assembly
a wand assembly adapted for applying clean water to a carpet to be cleaned, said wand assembly being adapted for recapturing said water in the form of waste water from the carpet;

a hose assembly having a first end and a second end, said first end being operationally coupled to said central tank and vacuum assembly, said second end being operationally coupled to said wand assembly, said hose assembly being for conduction water and waste water between said wand assembly and said central tank and vacuum assembly;

providing a water supply hose having a first and second end, said first end being couplable to said fresh water inlet, said second end being couplable to a water supply;

connecting a first end to said fresh water inlet;

connecting said second end to the water supply;

connecting said first end of said hose assembly to said central tank and vacuum assembly;

connecting said second end of said hose assembly to said wand assembly;

providing a waste disposal line having a first and second end,
said first end being couplable to said waste recovery assembly;
connecting said first end of said waste disposal line to said
waste recovery assembly;
placing said second end of said waste disposal line in a toilet;
connecting said system to an electrical power supply;
turning on the water supply;
running said wand assembly over an entirety of the carpet to
be cleaned;
turning off said system; and
disconnecting and removing said system after use.

19. The method of claim 18, wherein said step of running said
wand assembly over an entirety of the carpet to be cleaned further
comprises:

positioning said wand assembly as a first end of the carpet to
be cleaned;

applying fresh water through said wand assembly to a small
area of the carpet to rinse the pre-treat chemical from the carpet;

removing water and pre-treat chemical as waste water from
the small area of the carpet;

moving to an adjacent small area of the carpet;

repeating the above process steps until an entirety of the
carpet has been treated and rinsed.